



Observations in Non-Residential Green Power Purchasing Trends

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Partnership Introduction

- **Voluntary partnership**
- **Goal = market transformation**
 - ✓ Expand market for green power
 - ✓ Lower air pollution and greenhouse gases associated with electricity consumption
- **Launched in July 2001**
- **Now**
 - ✓ > 200 Partners
 - ✓ > 1 Million MWh of annually in green power commitments



Eligibility

- **Open to organizations interested in purchasing green power**
 - ✓ large *and* small end-use customers (not just large)
 - ✓ public and private sector organizations
 - ✓ U.S. facilities only
 - ✓ corporations and facilities as well as aggregations
 - ✓ not a subjective EPA judgement



Partner Electrical Load Categories

| If Your Annual Electricity Use Is ... | Your Annual Electricity Use Should Include At Least This Percentage Of Green Power |
|--|---|
| Over 100,000 MWh | 2% |
| 100,000 – 10,000 MWh | 3% |
| 10,000 – 1,000 MWh | 6% |
| 1,000 – 100 MWh | 10% |
| Under 100 MWh | 15% |



Partnership Growth by Year

| Year | Partners | Total Load | GP (MWh) | GP % of Load | New (MWh) | New % of Product |
|--------------|------------|-------------------|------------------|-----------------|----------------|---------------------|
| 2001 | 24 | 9,530,840 | 334,176 | 4% | 133,437 | 40% |
| 2002 | 69 | 4,763,984 | 248,839 | 5% | 144,120 | 58% |
| 2003 | 68 | 1,975,471 | 255,343 | 13% | 242,777 | 95% |
| total | 211 | 18,007,868 | 1,026,850 | 6% | 650,922 | 63% |

- ✓ increase in green power commitments
- ✓ increase in green power as a percentage of load
- ✓ increase in the portion of new renewable in purchase



Commitments by Load Category

| Level | Partners | Total Load | GP (MWh) | GP % of Load | New (MWh) | New % of Product |
|-------|------------|-------------------|------------------|-----------------|----------------|---------------------|
| 2% | 25 | 16,083,848 | 643,477 | 4% | 353,126 | 55% |
| 3% | 50 | 1,773,447 | 301,045 | 17% | 231,723 | 77% |
| 6% | 42 | 134,535 | 70,224 | 52% | 55,386 | 79% |
| 10% | 42 | 14,323 | 9,852 | 69% | 8,608 | 87% |
| 15% | 52 | 1,715 | 2,252 | 131% | 2,079 | 92% |
| | 211 | 18,007,868 | 1,026,850 | 6% | 650,922 | 63% |

- ✓ Despite fewer “2%” partners and lower “green power as a percentage of load” numbers, these partners are significant



Load Category Numbers by Year

| Year | 2001 | 2002 | 2003 | |
|------|----------------|----------------|----------------|------------------|
| 2% | 263,708 | 194,248 | 185,521 | 643,477 |
| 3% | 35,855 | 37,043 | 228,147 | 301,045 |
| 6% | 6,352 | 7,673 | 56,199 | 70,224 |
| 10% | 1,528 | 2,934 | 5,390 | 9,852 |
| 15% | 47 | 613 | 1,593 | 2,252 |
| | 307,489 | 242,512 | 476,849 | 1,026,850 |

- ✓ The commitments from “3%” partners increased significantly in 2003



Commitments by Org. Type

| | Partners | Total Load | GP (MWh) | GP % of Load | New (MWh) | New % of Product |
|----------------|------------|-------------------|------------------|-----------------|----------------|---------------------|
| B-F100 | 5 | 8,327,909 | 203,890 | 2% | 40,496 | 20% |
| B-F500 | 6 | 903,264 | 38,184 | 4% | 24,627 | 64% |
| B | 114 | 1,081,819 | 168,124 | 16% | 134,589 | 80% |
| G-Fed | 20 | 1,824,027 | 222,822 | 12% | 175,863 | 79% |
| G-Local | 22 | 1,980,896 | 187,554 | 9% | 102,056 | 54% |
| G-State | 4 | 2,299,036 | 88,989 | 4% | 60,909 | 68% |
| U | 15 | 1,434,318 | 92,352 | 6% | 91,176 | 99% |
| NGO | 23 | 22,101 | 2,035 | 9% | 1,906 | 94% |
| Other | 2 | 134,500 | 22,900 | 17% | 19,300 | 84% |
| | 211 | 18,007,868 | 1,026,850 | 6% | 650,922 | 63% |



What Market Are Partners Buying From?

| | Green Pricing (MWh) | Green Marketing (MWh) | On-site (MWh) | RECs (MWh) | REC futures (MWh) |
|-----|---------------------|-----------------------|---------------|------------|-------------------|
| 84% | | | | | |
| 2% | 17% | 44% | 26% | 13% | |
| 3% | 6% | 52% | 21% | 21% | |
| 6% | 61% | 12% | 4% | 16% | 7% |
| 10% | 42% | 18% | 13% | 27% | |
| 15% | 17% | 4% | 55% | 24% | |
| | 17% | 44% | 22% | 16% | 1% |

- ✓ Larger partners are buying more from competitive suppliers
- ✓ Medium partners are buying from utilities and REC marketers



What Renewables Are Partners Buying?

| 80% | solar (MWh) | wind (MWh) | geothermal (MWh) | Biogas (MWh) | Biomass (MWh) | Hydro (MWh) |
|------------|----------------|---------------|---------------------|-----------------|------------------|----------------|
| 2% | 1% | 40% | 0% | 34% | 2% | 23% |
| 3% | 4% | 53% | 8% | 32% | 1% | 3% |
| 6% | 5% | 85% | 0% | 10% | 0% | 1% |
| 10% | 8% | 80% | 0% | 8% | 0% | 4% |
| 15% | 12% | 79% | 5% | 4% | 0% | 1% |
| | 2% | 48% | 2% | 31% | 1% | 15% |

- ✓ Larger partners are mixing in more LFG - much more price sensitive
- ✓ Medium partners are buying much more wind



Premiums

| Green Tag Pricing Guidelines | |
|------------------------------|-------------------|
| Landfill Gas | \$2.50 – 6.00/MWh |
| Wind | \$6.00-18.00/MWh |
| Biomass | \$3.00 - 7.00/MWh |
| Solar | \$60 - 200/MWh |

| Green Pricing Premium 2002 | |
|-------------------------------------|--------------------|
| Utility Average | \$26/MWh |
| Competitive Supplier Average | \$13.70/MWh |
| Range | \$4.50 - \$100/MWh |

•Source: US Department of Energy, *Summary of Green Pricing Programs 2003*



Why are Partners Buying?

- **Meet organizational environmental objectives**
- **Enhance image or branding**
 - ✓ “We’re powered by renewable electricity”
- **Strengthen stakeholder relationships**
 - ✓ Positive Publicity
 - ✓ Employee morale
- **Diversify Generation Portfolio**
 - ✓ Hedge against volatile electricity prices
 - ✓ Broaden fuel supply options
 - ✓ Security issues

